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ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/775,490	NELSON, PATRICK N.	
	Examiner	Art Unit	
	HEATHER R. JONES	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-48 and 50-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-48 and 50-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/18/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-4, 7-48, and 50-59 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 42-48, 50, and 51 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 42-48, 50, and 51 define a computer-readable storage medium embodying functional descriptive material. However, the claim does not define a non-transitory computer-readable storage medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed computer-readable medium can range from paper on which the program is written, to a program simply contemplated and memorized by a person. In the state of the art, transitory signals are commonplace as a medium for transmitting computer instruction and thus, in the absence of any evidence to the contrary and give the broadest

reasonable interpretation; the scope of a "computer readable storage medium" covers a signal per se. In order to overcome the 101, the "computer readable storage medium" should be changed to "non-transitory computer readable storage medium".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 7-48, and 50-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian et al. (U.S. Patent 2005/0018775) in view of Griffits (U.S. Patent 6,262,776) in view of Markowitz et al. (U.S. Patent 6,457,052).

Regarding claim **1**, Subramanian et al. discloses a method, comprising: determining, by a computing device, whether two or more samples of a presentation are processed by a first component of a pipeline at an expected time based on a first timing error for a first sample and a second timing error for a second sample, the first sample being processed before the second sample (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value, thereby meaning that two or more samples are processed since every B-

picture is sampled and each one has its own result); requesting, by the computing device, a second component of the pipeline to alter a manner in which the second component processes a portion of the presentation if the at least one sample is not processed at the expected time (paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding), and taking the appropriate action by the second component in response to the requesting, wherein the second component is selected from a group comprising multiple components of the pipeline that are configured to take the appropriate action in response to the requesting (paragraphs [0047]-[0074]). However, Subramanian et al. fails to disclose that the second component of the pipeline alters the manner in which the second component processes a portion of the presentation of the presentation when the two or more samples are not processed at the expected time and when the first timing error is greater than the second timing error, the altering including taking corrective action to reduce a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation, wherein the portion of the presentation comprises at least one succeeding sample to the two or more samples; and wherein the multiple components is defined to comprise three components.

Referring to the Griffits reference, Griffits discloses a method for maintaining synchronization between audio and video comprising:

determining whether at least two sample of a presentation is processed by a first component of a pipeline at an expected time; and wherein the second component of the pipeline alters the manner in which the second component processes a portion of the presentation of the presentation when the two or more samples are not processed at the expected time and when the first timing error is greater than the second timing error, wherein the portion of the presentation comprises at least one succeeding sample to the two or more samples (Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late. Furthermore, the first and second samples are being compared in the fact that the system is monitoring the process of the decoding and once the frames are too early or too late other frames are altered. Griffits discloses both situations of the first timing error being greater or less than the second timing error since Griffits covers both the fact that frames can be too early and too late).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have altered the succeeding sample in the presentation as disclosed by Griffits in the method disclosed by Subramanian et al. in order to display the samples at the correct times

as well as to maintain a synchronization between audio and video data so that the viewer can not detect any problems when synchronizing the video and audio). However, Subramanian et al. in view of Griffits fails to explicitly disclose that the altering includes taking corrective action to reduce a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation; and wherein the multiple components is defined to comprise three components.

Referring to the Markowitz et al. reference, Markowitz et al. discloses a method for maintaining synchronization between audio and video wherein the altering includes taking corrective action to reduce a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation (col. 1, lines 43-46 – by dropping frames the quality is reduced).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have reduced the quality of the presentation as disclosed by Markowitz et al. in the method disclosed by Subramanian et al. in view of Griffits in order to easily synchronize the video and audio data. However, Subramanian et al. in view of Griffits in view of Markowitz et al. still fail to disclose wherein the multiple components is defined to comprise three components. Official Notice is taken that the pipeline of multiple components that the video and audio go through can comprise of any number of components, wherein the number can be any number larger than one. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to have had any one of those components be able to take corrective action regarding time management in order to deter incurring a huge lag time between components.

Regarding claim **2**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component comprises a media sink (Subramanian et al.: paragraph [0049] – media sink – comparing the PTS value with the STC value).

Regarding claim **3**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the second component comprises a codec (Subramanian et al.: paragraph [0049] – the decoder drops the B-picture therefore, altering the manner in which the decoder processes the signal; Griffits: Fig. 2).

Regarding claim **4**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component comprises a media sink and the second component comprises a codec (Subramanian et al.: paragraph [0049] – media sink – comparing the PTS value with the STC value; the decoder drops the B-picture therefore, altering the manner in which the decoder processes the signal; Griffits: Fig. 2).

Regarding claim **7**, Subramanian et al .in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a frame (Subramanian et al.: paragraph [0049] – one B-picture is a frame; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **8**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the two or more samples are processed at the expected time comprises comparing a timing value in each of the two or more samples to a predetermined time frame associated with the presentation (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **9**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the two or more samples are processed at the expected time comprises comparing a timing value in each of the two or more samples to a presentation clock (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **10**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the two or more samples are processed at the expected time comprises determining whether a respective timing value in the two or more samples was processed by the first component at the time specified by the respective timing value (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are

altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **11**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the two or more samples are processed at the expected time comprises determining whether a respective timing value in each of the two or more samples was processed by the first component within a given time of a time specified by the respective timing value (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **12**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including determining whether the two or more samples are processed at the expected time comprises determining if the first sample is processed by the first component at a first expected time

and determining if the second sample is processed by the first component at a second expected time (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value and is processed if the PTS value and the STC value differ by less than a predetermined threshold; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **13**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1, including determining whether the two or more samples are processed at the expected time comprises: determining the first timing error as a difference between a time at which the first sample is processed by the first component and a time at which the first sample is expected to be processed; and determining the second timing error as a difference between a time at which the second sample is processed by the first component and a time at which the first sample is expected to be processed (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value and is processed if the PTS value and the STC value differ by less than a

predetermined threshold; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **14**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1, including that the first sample comprises an associated first timing value and the second sample comprises an associated second timing value and wherein determining whether the two or more samples are processed at the expected time further comprises determining whether the first timing value more closely corresponds to a time at which the first sample is processed by the first component than the second timing value corresponds to a time at which the second sample is processed by the first component (Subramanian et al.: paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value and is processed if the PTS value and the STC value differ by less than a predetermined threshold; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics

on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **15**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that altering the manner in which the second component processes a portion the presentation comprises dropping the at least one succeeding sample (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **16**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a plurality of frames, altering the manner in which the second component processes the portion of the presentation comprises dropping a subset of the plurality of frames, wherein the subset comprises two or more frames (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are

monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **17**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component is a media sink, the second component is a codec, and the wherein altering the manner in which the second component processes a portion of the presentation comprises dropping at least one frame of the presentation (Subramanian et al.: paragraph [0049] – the presentation time stamp for every B-picture is compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **18**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the pipeline comprises a media source, a media sink, and a topology of media processing nodes; the first component is a node in the topology; and the second component is the

media sink (Subramanian et al.: paragraph [0049] – the presentation time stamp for every B-picture is compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **19**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the pipeline comprises a media source, a media sink, and a topology of media processing nodes; the first component is a node in the topology including a codec; and the second component is the media sink (Subramanian et al.: paragraph [0049] – the presentation time stamp for every B-picture is compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **20**, Subramanian et al. discloses a method, comprising: determining, by a computing device, when timeliness of sample processing in a multi-component pipeline is degrading based on processing times of a first sample and a second sample by calculating a first timing error for the first sample and a second timing error for the second sample (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; thereby meaning that two or more samples are processed since every B-picture is sampled

and each one has its own result); and altering, by a component in the multi-component pipeline of the computing device, the manner in which a component processes a portion of the presentation when the timeliness of the sample processing is determined to be degrading (paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding), the component is selected from a group comprising multiple components of the multi-component pipeline that are configured to take the appropriate action in response to a request (paragraphs [0047]-[0074]). However, Subramanian et al. fails to disclose comparing the processing times of a first sample and a second sample, the altering including taking corrective action by reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation, and wherein the portion comprises one or more succeeding samples to the first and second sample, and wherein the multiple components is defined to comprise three components.

Referring to the Griffits reference, Griffits discloses a method for maintaining synchronization between audio and video comprising: determining whether at least two sample of a presentation is processed by a first component of a pipeline at an expected time; and wherein the second component of the pipeline alters the manner in which the second component processes a portion of the presentation of the presentation when the two or more samples are not processed at the expected time,

wherein the portion of the presentation comprises at least one succeeding sample to the two or more samples (Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late. Furthermore, the first and second samples are being compared in the fact that the system is monitoring the process of the decoding and once the frames are too early or too late other frames are altered. Griffits discloses both situations of the first timing error being greater or less than the second timing error since Griffits covers both the fact that frames can be too early and too late).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have altered the succeeding sample in the presentation as disclosed by Griffits in the method disclosed by Subramanian et al. in order to display the samples at the correct times as well as to maintain a synchronization between audio and video data so that the viewer can not detect any problems when synchronizing the video and audio). However, Subramanian et al. in view of Griffits fails to explicitly disclose that the altering includes taking corrective action by reducing a quality of video filtering of the presentation and reducing a

quality of audio decoding of the presentation, and wherein the multiple components is defined to comprise three components.

Referring to the Markowitz et al. reference, Markowitz et al. discloses a method for maintaining synchronization between audio and video wherein the altering includes taking corrective action by reducing a quality of video filtering of the presentation and reducing a quality of audio decoding of the presentation (col. 1, lines 43-46 – by dropping frames the quality is reduced).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have reduced the quality of the presentation as disclosed by Markowitz et al. in the method disclosed by Subramanian et al. in view of Griffits in order to easily synchronize the video and audio data. However, Subramanian et al. in view of Griffits in view of Markowitz et al. still fail to disclose wherein the multiple components is defined to comprise three components. Official Notice is taken that the pipeline of multiple components that the video and audio go through can comprise of any number of components, wherein the number can be any number larger than one. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have had any one of those components be able to take corrective action regarding time management in order to deter incurring a huge lag time between components.

Regarding claim **21**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined relative to a single component in the pipeline (Subramanian et al.: paragraph [0049]; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **22**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first sample is determined relative to a first component in the multi-component pipeline and the processing times of the second sample is determined relative to a second component in the multi-component pipeline (Subramanian et al.: paragraph [0049]; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **23**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined using timing information in the first and second samples (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **24**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined using timing information in the first and second samples and a presentation clock (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of

frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **25**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of the sample processing is determined based on: a first timing difference between a time specified in a timing value in the first sample and a time that the first sample is processed by the component in the multi-component pipeline; a second timing difference between a time specified by a timing value in the second sample and a time that the second sample is processed by the component in the multi-component pipeline (Subramanian et al.: paragraph [0049]; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **26**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of the sample processing is determined based on: the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a first component in the multi-component pipeline;

and the second timing error being a difference between a time specified by a timing value in the second sample and a time that the second sample is processed by a second component in the multi-component pipeline (Subramanian et al.: paragraph [0049]; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **27**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of the sample processing is determined by: determining the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by the component in the multi-component pipeline; determining the second timing error being a difference between a time specified by a timing value in the second sample and a time that the second sample is processed by the component in the multi-component pipeline, wherein the second sample is processed at a later time than the first sample; and determining that timeliness of sample processing is degrading based on the second timing error being greater than the first timing error (Subramanian et al.: paragraph [0049];

Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **28**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of the sample processing is determined by: determining the first timing error being a difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a selected component in the multi-component pipeline; determining the second timing error being a difference between a time specified by a timing value in the second sample and a time the second sample is processed by the selected component, wherein the second sample is processed at a later time than the first sample; and determining that timeliness of sample processing is degrading based on the second timing error being greater than the first timing error (Subramanian et al.: paragraph [0049]; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines

11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **29**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that altering the manner in which the component in the multi-component pipeline processes a portion of the presentation comprises instructing the component to drop the one or more succeeding samples (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **30**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that altering the manner in which the component in the multi-component pipeline processes the portion of the presentation comprises instructing the component to drop each sample in a frame of the presentation (Subramanian et al.: paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding; Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are

altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **31**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that each component comprises processor executable instructions executed by a processor (Subramanian et al.: Fig. 2).

Regarding claims **32-41**, these are apparatus claims corresponding to the method claims 1-4, 13-17, and 20. Therefore, claims 32-41 are analyzed and rejected as previously discussed with respect to claims 1-4, 13-17, and 20.

Regarding claims **42-46**, these are computer-readable medium claims corresponding to the method claims 1-4, 8, 15, and 20. Therefore, claims 42-46 are analyzed and rejected as previously discussed with respect to claims 1-4, 8, 15, and 20. Furthermore, Subramanian et al. comprises processor executable instructions executed by a processor (Fig. 2).

Regarding claims **47**, **48**, **50**, and **51**, these are computer-readable medium claims corresponding to the method claims 1-4, 8, 13, and 15. Therefore, claims 47, 48, 50, and 51 are analyzed and rejected as previously discussed with respect to claims 1-4, 8, 13, and 15.

Regarding claim **52**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a third sample and a fourth sample (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **53**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claims 1 and 13, including that the method further comprises: if the second timing error is greater than the first timing error, taking the corrective action, wherein the portion of the presentation comprises two or more succeeding samples to the two or more samples (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **54**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claims 1, 13, and 53 including that the two or more succeeding samples are not consecutive samples (Griffits: Fig. 11, step 475 - all B frames are dropped regardless of where they are).

Regarding claim **55**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 20 including that the portion of the presentation comprises a third sample and a fourth sample (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **56**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claims 20 and 28 including that the method further comprises: if the timeliness of the sample processing is said determined to be degrading, taking the corrective action on the portion of the presentation, wherein the portion of the presentation comprises two or more succeeding samples to one or more of the first sample and the second sample (Griffits: Fig. 11 – the next sample is altered; col. 18, lines 11-37 – frames are monitored and once the decoder gets too far behind then frames are

altered in order to allow the decoder to resynchronize the video and audio; col. 18, lines 39-56 – various statistics on the timing of frames are monitored; col. 19, lines 11-36 - four situations are determined that include frames being too early and too late).

Regarding claim **57**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claims 20, 28, and 56 including that the two or more succeeding samples are not consecutive samples (Griffits: Fig. 11, step 475 - all B frames are dropped regardless of where they are).

Regarding claim **58**, Subramanian et al. in view of Griffits in view of Markowitz et al. discloses all the limitations as previously discussed with respect to claim 42 including that the plurality of components of the pipeline are each configured to take corrective action in response to a request (Subramanian et al.: paragraphs [0047]-[0074] – the request being once there is a timing error detected that component that detects the error corrects it).

Regarding claim **59**, grounds for rejecting claim 58 apply for claim 59 in its entirety.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones
Examiner
Art Unit 2621

HRJ
July 31, 2010

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621